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Working while studying at university: The relationship between work benefits and demands and engagement and well-being

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Abstract

We tested a role-conflict, depletion, and enrichment model, in which work-based benefits (enabling resources, psychological rewards, and psychological involvement) and work-based demands (time-, strain-, and behaviour-based demands, and hours worked) were antecedents to work-university conflict and work-university facilitation, which, in turn, were antecedent to students' academic engagement (dedication and vigour) and well-being (general and context-specific feelings about university). We also tested whether conflict and facilitation acted as mediators in the relationships between benefits and demands and the outcomes of engagement and well-being. The hypotheses were tested using 185 university students (77% female; mean age = 22.7 years) who were working while studying. Work-based benefits (enabling resources, rewards, and involvement) were associated with higher work-university facilitation; more time demands and fewer psychological rewards were associated with more work-university conflict; facilitation was associated with more engagement (dedication) and general well-being; and conflict was associated with more negative feelings towards the university. There were no mediation effects. Working while studying is related to students' engagement and well-being, although modest effects were explained by role-conflict theory.

Keywords: work-university conflict; work-university facilitation; work-based benefits; work-based demands; engagement; well-being; role-conflict; depletion; enrichment; working while studying

Working while Studying at University: The Relationship between Work Benefits and Demands and Well-Being and Engagement

There is a growing trend in Australia and other countries for university students to combine their studies with paid employment. In 1971, in Australia, 20% of those studying at tertiary level were at the same time employed in full or part-time paid work (Australian Bureau of Statistics [ABS], 2009). This increased to 54% in 2001 (ABS, 2009) and 72% in 2007 (Devlin, James, & Grigg, 2008). Similar patterns occur in other countries, such as New Zealand (Manthei & Gilmore, 2005) and the USA (Butler, 2007). While some of this desire to work while studying is driven by the need for increased discretionary spending, most is in response to increased costs associated with tertiary study and reduced financial support from governments (Devlin et al., 2008). Anticipated outcomes of this increased reliance on working to support study are reduced engagement with university study and life and elevated distress about making ends meet (Devlin et al., 2008; James, 2002). However, there is little understanding of the mechanisms underlying how paid employment might affect student engagement and well-being. Contributing to this literature, we test a theoretical model based on depletion and enrichment aspects of role overload and conflict where benefits and demands from one role (paid employment) are considered as antecedents to facilitation and conflict with a second role (university student), which, in turn, affect engagement and well-being in the second role. See Figure 1.

Work-To-University Role Conflict and Facilitation

Role conflict and facilitation effects from a role-conflict theory perspective have been researched largely in relation to work-to-family and family-to-work influences, although some researchers have assessed the effect of other non-work roles, such as community, religion, and leisure on work and family outcomes (e.g., Kirchmeyer, 1992; Rice, Frone, & McFarlin, 1992). Role conflict and facilitation are also of interest to educational planners and

policy-makers. Here the concern is that multiple roles and role overload will have negative effects on student outcomes, including student engagement, well-being, and ultimately academic performance, career progress, and later life achievements. There is also an interest in the sorts of activities in non-educational settings that will benefit the individual in their student role (Lenaghan & Sengupta, 2007).

Early studies in the work-family domains focused on the negative effects of role conflict, whereas, in more recent years, there has been a focus on the facilitative aspects as well (Wayne, Grzywacz, Carlson, & Kacmar, 2007). Conflict, which occurs when participation in one role (e.g., work) adversely affects participation in a second role (e.g., university; Greenhaus & Beutell, 1985), is primarily viewed as detrimental to the person (Peeters, Watez, Demerouti, & de Regt, 2009); for example, spending time at work can interfere with educational activities and learning. On the other hand, facilitation, or the enrichment of one role by participating in another, is considered a positive process advantaging the individual (Zimmerman & Hammer, 2010); for example, skills and responsibilities learned in the work role can enhance performance at university.

Role-conflict research is based on the premise that work and non-work domains are largely independent and compete for the limited resources of the individual (Gareis, Barnett, Ertel, & Berkman, 2009). This “scarcity hypothesis” suggests that managing multiple roles will inevitably lead to role conflict (Greenhaus & Powell, 2006). Work-to-family conflict is considered to be influenced by three specific variables: time-, strain-, and behaviour-based demands (Greenhaus & Beutell, 1985). Time-based conflict occurs when multiple roles compete for the individual’s time; strain-based conflict occurs when stressors (e.g., anxiety and irritability), which are generated in one role, are transferred to the second role; and behaviour-based conflict occurs when behaviours (e.g., assertiveness, dominance), which are functional in one role, are applied inappropriately in another (Greenhaus & Beutell, 1985).

Facilitation, on the other hand, reflects “the extent to which experiences in one role improves the quality of life in the other” (Greenhaus & Powell, 2006, p. 73). Role-to-role facilitation is enhanced by being exposed to enabling resources, psychological rewards (Voydanoff, 2004), and by being involved (Allis & O’Driscoll, 2007). Enabling resources are skills and abilities learned in one domain that aid performance in another. Psychological rewards reflect status enhancement and privileges gained in one domain that aid performance in another. Involvement is the satisfaction and enthusiasm generated in one domain that spills over to motivate and energise in other roles. The facilitation perspective considers that participation in one role is enhanced and made easier by engagement in another role, especially when the other role is meaningful and satisfying (Greenhaus & Powell, 2006).

There are two specific, competing theories related to multiple role research. The first, and most widely used, is the depletion model (Buda & Lenaghan, 2003; Lenaghan & Sengupta, 2007), which proposes that people have fixed levels of physical and psychological energy to expend, and that resources used in one role deplete those available for another role. In the work-family domains, negative effects for both work (e.g., Ford, Heinen, & Langkamer, 2007; Michel, Mitchelson, Kotrba, Le Breton, & Baltes, 2009) and family (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Ford et al., 2007) have been identified as a result of cross-role competing demands. Applied to students, this model suggests that working will reduce the resources available for study, producing work-to-university conflict.

The second model, of enrichment (Marks, 1977; Sieber, 2004), proposes that engaging in multiple roles provides benefits for individuals that outweigh the negative effects of cross-role demands. This model assumes that individual resources are abundant and expandable, and, as such, allow individuals to not only meet demands across multiple domains, but also to draw on resources from one domain to enhance engagement in the other (Barnett & Hyde, 2001). While most research in the work-family area has focused on conflict (Eby et al.,

2005), there is evidence that benefits from one role (e.g., a supportive partner at home) do spill over to the other (e.g., less strain at work; Zimmerman & Hammer, 2010). The enrichment model suggests that engagement in the work role would energise the student and facilitate outcomes in the academic setting, such as engagement and positive well-being.

Despite calls for examining conflict and facilitation together (Butler, 2007; Grzywacz & Carlson, 2007), few studies have tested joint work-university conflict and enrichment models with university students. Most research has focused on the conflict aspects of multiple roles, which parallels work-family research, and has focused on health outcomes. Giancola, Grawitch, and Borchert (2009) found negative associations between work, study, and family role demands and conflict and psychological health in mature-aged students. Lenaghan and Sengupta (2007) found direct and indirect reciprocal effects (work interfering with study, study interfering with work) for role overload (demand-based strain) and role ease (enrichment) on well-being via role-conflict. Butler, Dodge, and Faurote (2010) identified links between conflict and alcohol use. Regarding university-to-work conflict, Wyland, Lester, Mone, and Winkel (2013) identified that university involvement was related to higher conflict, which, in turn, was associated with poorer supervisor ratings at work in postgraduate students. Leisure-to-university conflict has been associated negatively with intention to pursue studies, concentration, and life satisfaction, and positively with depression and hopelessness (Ratelle, Senècal, Vallerand, & Provencher, 2005).

Only a few studies have assessed role-conflict and role-facilitation simultaneously in university students. Meeuwisse, Severiens, and Born (2010) found that family-to-university conflict and facilitation were influenced by family involvement and support, and conflict (negatively) and facilitation (positively) were then related to effort. Others showed that core self-evaluations and proactive personality were antecedents to both work-university conflict and enrichment, and had direct and indirect effects (via conflict and facilitation) on university

attendance, GPA, and satisfaction, and work performance and satisfaction, in the expected directions (McNall & Michel, 2011). Finally, Butler (2007) operationalised work demands and benefits as job characteristics and found that work demands (job demands and hours worked) were associated with conflict, and work benefits (job control and job-university congruence) were associated with facilitation. Conflict was then related to poorer school performance (but not to satisfaction), whereas facilitation was related to better performance and satisfaction. Mediation effects for conflict and facilitation were also identified.

Despite the limited role conflict research with university students, studies have shown that employment both detracts from study (e.g., less time available, Silver & Silver, 1997; being more tired, Broadbridge, Swanson, & Taylor, 2000; poorer performance, Sorensen & Winn, 1993; poorer well-being, Lenaghan & Sengupta, 2007) and advantages students (e.g., develops time management and generic work skills and eases financial strain; Callender & Kemp, 2000; Sorensen & Winn, 1993). Students themselves have mixed feelings. Most now consider working while studying to be normal, but that it distracts them from their studies (Curtis & Williams, 2002). They also report social and career benefits, the acquisition of relevant skills and knowledge, and welcome time-out from study (Tam Oi & Morrison, 2009; Curtis & Shani, 2002). Given the importance of working while studying, and the lack of research into it, we apply a theoretical perspective to assess both conflict and facilitation. Testing both in a single model is important as it allows the relative contributions of each to be assessed, and tests if benefits still accrue in the context of demands; and vice versa.

Engagement and Well-being

We assess the effects of conflict and facilitation on two outcome variables: student engagement and well-being. Student engagement is “the time, energy and resources students devote to activities designed to enhance learning at university” (Krause, 2007, p. 1). It is considered a critical construct related to the educational experience as it is one of the best

proxies for student learning, incorporating dimensions of self-set challenge, effort, contact with educators and the teaching institution, participation in educational and extra-curricular activities, and feelings of belonging and worth (Devlin et al., 2008). Student engagement is associated positively with persistence (Bridges, Cambridge, Kuh, & Leegwater, 2005), performance (Pike, 2000), and satisfaction (Kuh, Kinzie, Schuh, & Whitt, 2005). For a review of outcomes of engagement see Trowler (2010). Subjective well-being, which involves self-acceptance, positive relationships with others, a sense of autonomy and competence, goal directedness, and a focus on personal growth (Ryff, 1989), is also important to students as it results in optimal functioning and engagement (Steele & Fullagar, 2009). Well-being has been related to role conflict and facilitation in students (Butler, 2007; Lenaghan & Sengupta, 2007) and implicated in university persistence (Perrine, 1999), and school (Ruus et al., 2007) and university success (Pritchard & Wilson, 2003).

Present Study

We examined the antecedents and consequences of role-conflict and role-facilitation in a sample of university students who were working while they studied. Antecedents tested were work-based benefits (enrichment, rewards, and involvement) and demands (time, strain, behaviour, as well as hours worked). Outcomes assessed were academic engagement and well-being (context-specific and general). Facilitation and conflict have been treated as mediating variables in the literature (Allis & O'Driscoll, 2008; Butler, 2007). Therefore, we also assessed these mediated relationships. Finally, while work-family research proposes a bi-directional relationship between work and family (Frone, 2003), we focus on the work to university effects, as study is the salient aspect for university students (Butler, 2007).

Method

Participants

These were 185 undergraduate university students enrolled in a social science program at a large regional university in Australia (77% female; mean age = 22.7, $SD = 6.6$; mean educational achievement on a 5-point scale of 1 = *well below average* to 5 = *well above average* = 1.9, $SD = 0.6$). They worked an average of 16.3 hours per week ($SD = 7.9$; range 3 - 40) in a range of settings, including hospitality, tourism, retail, health care, and construction.

Measures

Unless indicated otherwise, all questions were answered on 5-point Likert-type scales with endpoints including *strongly agree/strongly disagree* and *all of the time/hardly ever*. Higher scores reflected more of the construct being assessed. Some scales were adapted from other domains, where, for example, terms like “school” were replaced with “university”. All items were reviewed by multiple researchers as a check for content validity and piloted with students who commented on readability and ease of understanding. Adapted items can be obtained from the first author.

Work-based benefits. We assessed three types of work-based benefits: enabling resources (skills learned in one domain that aid performance in another), rewards (status enhancement and privileges gained in one domain that aid performance in another), and involvement (commitment and investment in work). *Enabling resources* were assessed using the 4-item Personality Enrichment Subscale (e.g., work “Develops skills in me that are useful at university”; “university” replaced “work” in our study). *Rewards* were assessed using the 3-item Privileges Gained Subscale (“My job earns me certain rights and privileges that I otherwise could not enjoy”) and the 4-item Status Enhancement Subscale (“My job improves my personal image”). These three subscales were drawn from the Positive Spillover Scale (Kirchmeyer, 1992), which was devised to assess positive spill over from non-work domains to the work domain. Kirchmeyer (1992) reported high internal reliability for the total scale ($\alpha > .80$), and supported validity of the subscales by showing that they were correlated

positively with satisfaction and not related to negative spill-over. Alphas in our study were .76, .74, and .73, respectively. *Involvement* was assessed using eight items from the Psychological Involvement Scale (Lodahl & Kejner, 1965). A sample item was “The major satisfaction in my life comes from my job”. The full scale has recorded high internal (.87) and test-retest reliabilities (.85; Kanungo, 1982) and support for validity (Gorn & Kanungo, 1980). The internal reliability for the eight items was .73.

Work-based demands. We assessed time-, strain-, and behaviour-based work demands, and the number of hours worked, all of which can affect performance and satisfaction in another domain (Kirchmeyer, 1992). *Time-based demands* were assessed using a 6-item scale devised specifically for the study. We used the one time-based demand item created by Kirchmeyer (1992; work “Demands time from me that could be spent on my studies”) and created five additional items that tapped the same construct (e.g., “I spend a lot of time thinking about work” and “I often run out of time to get everything done because of my work”). Alpha for this scale was .74, and in support of validity, it was unrelated to enrichment and related positively with strain-based demands. *Strain-based demands* were assessed using the 4-item Strain-based Demands Subscale (“My job tires me out so that I feel drained”), and *behaviour-based demands* were assessed using the 3-item Behaviour-based Demands Subscale (work “Makes it hard to adjust back to the way I must act at university”). Both subscales were taken from Kirchmeyer’s (1992) Negative Spillover Scale. Kirchmeyer reported alphas of $> .79$ for the total Negative Spillover Scale, and demonstrated that the subscales were independent and related to other constructs in the expected directions. Alphas in our study were .81 and .80, respectively.

Work-university facilitation. This was measured with the 5-item Work-School Facilitation Scale (Butler, 2007). A sample item was “Having a good day at work makes me a better university student”. The original scale had an alpha of .85, and validity was supported

by correlations with other school-based constructs, such as satisfaction (Butler, 2007). Alpha in our sample was .73.

Work-university conflict. This was assessed using the 5-item Work-School Conflict Scale (Butler, 2007). A sample item was “Because of my job, I go to university tired”. Butler (2007) reported good reliability ($\alpha = .88$) and validity (negative associations with facilitation, effort, and school attendance). Alpha with our sample was .82.

Student well-being. We assessed *context-free, general well-being* using the 5-item WHO Well-being Index (Bech, Olsen, Kjoller, & Rasmussen, 2003), which measures recently-experienced affect (e.g., “Over the last two weeks, I have felt cheerful and in good spirits”). Alpha of .82 has been reported, and the scale has strong associations with longer well-being scales (De Wit, Pouwer, Gemke, Delemarre-van de Waal, & Snoek, 2007). Alpha with our sample was .82. *Context-specific, university well-being* was assessed using the Job Affect Scale (Warr, 1990). Students responded to the question, “Thinking of the past few weeks, what has been your attitude towards your university studies?” using 12 descriptors: relaxed, worried, depressed, calm, contented, gloomy, optimistic, tense, enthusiastic, cheerful, miserable, and uneasy. The scale is used as two distinct factors based on the positive and negative items (Sevastos, Smith, & Cordery, 1992). Alphas $> .80$ have been reported for both scales, and validity has been supported by finding expected correlations with measures of well-being (Sevastos et al., 1992). Alphas in our study were .82 (positive feelings towards university) and .85 (negative feelings).

University engagement. Engagement was measured using the 10-item Utrecht Work-Engagement Scale for Students (Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002), which assesses university absorption (“Time flies when I’m studying at university”), dedication (“I am proud of my university studies”), and vigour (“When I am studying, I have a lot of energy”). Schaufeli et al. (2002) found three factors, supported validity by finding

expected associations with well-being, and reported alphas $> .70$ for each subscale. We found two factors, which we labelled dedication and vigour. Alphas were $.74$ and $.83$, respectively.

Procedure

Employed students were recruited via class websites and from campus advertising. In return for participating, they were eligible for course credit and entry in a draw for a \$50 shopping voucher. The study was approved by the authors' human ethics' committee.

Results

We tested the model reported in Figure 1 (maximum likelihood estimation in AMOS V22) using parcels and individual items (for the 3-item behaviour-demand scale) to represent the latent variables (cf. Landis, Beal, & Tesluck, 2000). Parcels were created by running separate exploratory factor analyses for each scale, rank ordering the items by factor loading, and allocating items to the parcels using an item-to-construct balance approach (Hau & Marsh, 2004). We assessed a measurement model to ensure all latent variables were independent and could be represented by their parcels or items. We then tested the structural relationships indicated in Figure 1, and tested if conflict and facilitation mediated between benefits and demands and the outcome variables. Fit statistics were chi-square (χ^2), normed chi-square (χ^2/df), Comparative Fit Index (CFI), and the Root Mean-Square Error of Approximation (RMSEA). For a sample of < 250 with > 12 observed variables, Hair, Black, Babin, and Anderson (2010) indicated that χ^2 is expected to be significant, and that a $\chi^2/df < 3.0$, $CFI \geq .95$, and an $RMSEA < .08$ indicate a good fit.

The fit statistics for the measurement model were good, $\chi^2(245) = 371.42$, $p < .001$, $\chi^2/df = 1.52$, $CFI = .95$, and $RMSEA = .05$, standardised loadings on all latent variables were high and significant ($p < .001$; range $.66$ to $.91$) supporting independence of the scales and construct validity, and the correlations among the latent variables mirrored the bivariate correlations. See Table 1. In the structural model, the significant paths were from enrichment

($\beta = .25, p = .035$), rewards ($\beta = .38, p = .002$), and involvement ($\beta = .32, p = .007$) to facilitation; from rewards ($\beta = -.33, p = .025$) and time-demands ($\beta = .99, p < .001$) to conflict; from facilitation to dedication ($\beta = .19, p = .030$) and well-being ($\beta = .38, p < .001$); and from conflict to negative feelings about university ($\beta = .20, p = .029$). From this: (a) perceiving more enrichment, rewards, and involvement at work was associated with higher work-university facilitation; (b) perceiving more work-based time demands and receiving fewer rewards at work was associated with more work-university conflict; (c) higher work-university facilitation was associated with better engagement (dedication) and well-being; and (d) higher work-university conflict was associated with more negative feelings about university. The model accounted for 66% of the variance in work-university facilitation, 77% in work-university conflict, 4% in engagement (dedication), 2% in well-being, and 5% in negative feelings towards university. These paths are reported in Figure 2.

Mediation

For mediation, a predictor should be associated with both mediator and outcome, the mediator should be associated with the outcome, and the relationship between these two should disappear (full mediation) or be reduced significantly (partial mediation) when the mediator is present (Baron & Kenny, 1986). The structural analysis above demonstrated that facilitation potentially mediated between benefits (enrichment, rewards, and involvement) and engagement (dedication) and general well-being, and that conflict potentially mediated between demands (time and rewards) and negative feelings towards university. When we tested the direct effects (i.e., the relationships between predictors and outcomes), work-place benefits and demands explained 15% of the variance in negative feelings towards university, 4% in positive feelings, 15% in well-being, 8% in dedication, and 4% in vigour. However, no individual predictor accounted for unique variance, indicating no mediating roles for facilitation and conflict.

Discussion

We tested a role conflict and facilitation model in the work-university domain, which was based on theories of depletion (i.e., pressures from one domain make participation in another domain difficult) and enrichment (i.e., energy is abundant and facilitates multiple role engagement; Lenaghan & Sengupta, 2007). The study was the first to assess a comprehensive range of benefits and demands with university students, to test both benefits and demands as antecedents to both facilitation and conflict, and to assess such a model using engagement as an outcome variable.

As expected from the enrichment model, the work-based resources of enabling, rewards, and involvement were associated positively with facilitation, after controlling for the effects of work-based demands. These relationships are consistently found in the work-family research literature (Allis & O'Driscoll, 2007; Rice et al., 1992; Voydanoff, 2004), and Butler (2007) found that two positive job characteristics (job control and job-university congruence) were associated positively with university students' facilitation. With over two-thirds of the variance in facilitation accounted for by these predictors, and each identified as a unique predictor, these results support the evaluation of these work-based benefits as predictors of facilitation. Butler (2007) assessed specific job characteristics, and future studies need to assess whether specific aspects of work (such as job characteristics) augment these overarching domains of enabling, rewards, and involvement.

The model we assessed also included demands as antecedents to facilitation. Here we found that none of the demands (time-, strain-, or behaviour-based, or hours worked) was associated with facilitation. This indicates that, for example, working fewer hours or engaging in less stressful work is not associated with higher levels of facilitation. Identifying work-based demands, which, if managed well, would be associated with higher levels of facilitation, is an important area for research. In the work-family domain, actual and

perceived work-overload is related positively to work-family conflict and negatively to work-family facilitation (Aryee, Srinivas, & Tan, 2005), suggesting that managing work levels might benefit both work-family conflict and facilitation. Detecting similar variables in the work-university domain could lead to strategies to assist students connect to their studies and institution. These results regarding the relationship between work-based benefits and facilitation suggest that when university students, who work while they study, are engaged in jobs, which, for example, are perceived to develop useful skills, teach responsibility (enabling resources), bring rights and privileges not attainable elsewhere, improve self-image and status (psychological rewards), and generate meaningful and satisfying activities (psychological involvement), they also report that these benefits make them better students, as they assist them to manage personal and academic issues at university (work-university facilitation).

As expected by the depletion model, time-based demands explained unique variance in work-university conflict. This result is consistent with the findings of Markel and Frone (1998), who found that demands at work were associated with higher work-school conflict in adolescent school children, when work-based benefits were not controlled, and consistent with Butler (2007), who found the number of hours worked was the strongest predictor of conflict in their sample of undergraduate students, when the work-based benefit of job control was controlled. This result has also been found in the work-family literature, where researchers have reported positive relationships between time demands and work-family conflict, while controlling for work-based benefits (e.g., Aryee, Srinivas, & Tan, 2005). The results here suggest that when students perceive that their job is demanding of their time, they also perceive that it interferes with their university work, including leaving them more tired, with less time to study, and having to skip classes. As the number of hours worked were controlled for in this relationship, it was the students' perceptions that were important, rather than the actual hourly commitment made to their job.

The other two work-based demands (strain and behaviour), while bivariately correlated with conflict, did not explain unique variance over and above that explained by time-based demands and the three work-based benefit variables. The scales we used assess broad constructs of strain (e.g., my job makes me irritable) and behaviour (e.g., I dislike how I have to behave at my job) and these constructs might need to be decomposed to tease out which aspects are most salient for university students. Butler (2007), for example, found that job control, which has overlap with the strain and behaviour constructs (Ganster, 1989), was associated with conflict in university students, and other job characteristics should be explored. Warr (1994) identified nine job characteristics (e.g., autonomy, social support, feedback, meaningfulness), which are associated with work performance and satisfaction (and conversely, work demand and dissatisfaction), which should be investigated in relation to students who work while they study.

One work-based benefit, rewards, was associated negatively with conflict, suggesting that when work is status-enhancing and generates privileges not obtainable elsewhere, that this results in less work-university conflict. Butler (2007) found that job control was associated with less conflict for university students, and other researchers have identified work identity and the opportunity to discuss school at work as correlates of reduced conflict (Grzywacz & Butler, 2005; Thomas & Ganster, 2005). Other work-based benefits need to be assessed, as identifying variables that reduce conflict (and ideally increase facilitation) would allow students to be more selective in the jobs they take, and allow for interventions with students that might give them better skills to enhance reward systems that allow them to better manage their work roles.

The variance accounted for in work-university facilitation and conflict was substantial (66% and 77%, respectively), which supports the use of the benefits and demand variables selected for the study. When researchers are investigating facilitation and conflict, or when

interventions are being considered for university students who work while studying, incorporating these particular variables need to be considered.

Facilitation was associated with one aspect of engagement, dedication, and better general well-being, suggesting that work activities that contribute to being a better student (e.g., being able to discuss university problems at work and developing skills at work) result in more dedication and commitment at university, and more optimism and good spirits generally. The result for engagement has not been demonstrated before for university students, although previous research has found that increased levels of facilitation lead to positive affect, increased life satisfaction, and well-being in university students and in adults (Butler, 2007; Lenaghan & Sengupta, 2007; Perrone, Webb, & Blalock, 2005). The variance accounted for in dedication and well-being was small (4% and 2%, respectively), and work-university facilitation was not associated with context-specific, university well-being or the vigour component of engagement, suggesting that there are other, more important, influences on student engagement and well-being than work-to-university facilitation.

Similarly, conflict (i.e., the job interfering with university responsibilities and life) was associated with more negative feelings towards university, but, again, the effect was small, with only 5% of the variance explained. Additionally, work-university conflict was not associated with engagement (dedication or vigour) and general well-being.

Given the growing importance of work for university students and the importance of engagement and well-being to their academic progress (Devlin et al., 2008), there needs to be further examination of the relationships between facilitation and conflict and these university-related variables. Studies in the work-family domain typically find associations between facilitation and conflict and specified outcome variables (Amstad, Meier, Fasel, Elfering, & Semmer, 2011), and Butler (2007) found a relationship between both variables and university performance and satisfaction in university students. Work-family researchers have begun to

examine the conditions under which facilitation and conflict might be related to performance (e.g., at work) and well-being (e.g., at work and home). Witt and Carlson (2006), for example, found that the relationship between family-work conflict and job performance was stronger when conscientiousness was higher and weaker when organisational support was lower. It is likely that facilitation and conflict for university students will be more influential under some conditions, versus others. For example, work-to-university conflict might have a stronger relationship with negative well-being when financial stress is higher. Additionally, facilitation and conflict, which have been treated largely as stable, ongoing effects rather than episodic ones (Maertz & Boyar, 2011), might not operate this way for students, whose pressures vary across the semester and year, depending on whether they are in-semester or out, or have exams or assignments due, for example, and need to be tested in this light.

The outcomes from the study need to be considered in the light of some limitations. The sample was quite homogenous, being drawn from a single university, and was over-represented by female students; thus, restricting how widely results can be generalised. Future studies need to assess more diverse samples, and include a more equal gender balance, which would allow testing for gender differences. The study was cross-sectional, and while the model proposed was plausible and consistent with theoretical propositions, longitudinal studies are required to be able to confirm the direction of the relationships. We found no mediating effects, which is not typical of work-family studies (Ford et al., 2007), and longitudinal research will be able to shed more light on this. Finally, our data were collected mid-semester, and different effects might be found if students were surveyed at other times, for example, at the beginning of the semester, when academic demands might be at their weakest, or at the end of semester, when exams and assignments are pending and pressures on students might be at their highest.

Notwithstanding, we found strong relationships between work-based benefits and demands and facilitation and conflict, but weaker relationships between work-based benefits and demands and facilitation and conflict, and between facilitation and conflict and engagement and well-being. The results suggest that, for university students, working while studying has potentially both positive and negative effects on life at university. The results also suggest that the depletion and enrichment models are useful perspectives from which to examine these phenomena. Given the large number of university students now working while studying, this remains an important area for researchers. We examined engagement and well-being as outcome variables, but other outcome variables, such as performance, progress, and achievements need to be assessed, and the effects of work, in combination with studying, need to be assessed on other important domains, such as identity and career development.

References

- Allis, P., & O'Driscoll, M. (2008). Positive effects of nonwork-to-work facilitation on well-being in work, family and personal domains. *Journal of Managerial Psychology, 23*, 273-291. doi:10.1108/02683940810861383
- Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work-family conflict and various outcomes. *Journal of Occupational Health Psychology, 16*, 151-169. doi:10.1037/a0022170
- Aryee, S., Srinivas, E., & Tan, H. (2005). Rhymes of life: Antecedents and outcomes of work-family balance in employed parents. *Journal of Applied Psychology, 90*, 132-146. doi:10.1037/0021-9010.90.1.132
- Australian Bureau of Statistics (2009). *Census of population and housing: Australia's youth, 2001*. Retrieved from <http://www.abs.gov.au>.
- Barnett, R. C., & Hyde, J. S. (2001). Women, men, work, and family. *American Psychologist, 56*, 781-796. doi:10.1037//0003-066X.56.10.781

- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology, 51*, 1173-1182.
Retrieved from [//www.apa.org/pubs/journals/psp/index.aspx](http://www.apa.org/pubs/journals/psp/index.aspx)
- Bech, P., Olsen, L. R., Kjoller, M., & Rasmussen, N. K. (2003). Measuring well-being rather than the absence of distress symptoms. *International Journal of Methods in Psychiatric Research, 12*, 85-91. doi:10.1002/mpr.145
- Bridges, B. K., Cambridge, B., Kuh, G. D., & Leegwater, L. H. (2005). Student engagement at minority serving institutions. In G. Gaither, *Minority retention: What works? No. 125* (pp. 25-43). San Francisco, CA: Jossey-Bass.
- Broadbridge, A., Swanson, V., & Taylor, C. (2000). Retail change: Effects on employees' job demands and home life. *The International Review of Retail, Distribution and Consumer Research, 10*, 417-432. doi:10.1080/09593960050138967
- Buda, R., & Lenaghan, J. (2003). Engagement in multiple roles: An investigation of the student-work relationship. *Journal of Behaviour and Applied Management, 6*, 211-224.
Retrieved from <http://www.ibam.com/pubs/jbam/>
- Butler, A. B. (2007). Job characteristics and college performance and attitudes: A model of work-school conflict and facilitation. *Journal of Applied Psychology, 92*, 500-510.
doi:10.1037/0021-9010.92.2.500
- Butler, A. B., Dodge, K. D., & Faurote, E. J. (2010). College student employment and drinking. *Journal of Occupational Health Psychology, 15*, 291-303.
doi:10.1037/a0019822
- Callender, C., & Kemp, M. (2000). Changing student finances: Income, expenditure and take-up of student loans among full-and part-time higher education students in 1998/9.
Retrieved from <http://dera.ioe.ac.uk/4694/1/RR213.pdf>

- Curtis, S. & Shani, N. (2002). The effect of taking paid employment during term-time on students' academic studies. *Journal of Further and Higher Education, 26*, 129-138. doi:10.1080/03098770220129406
- Curtis, S., & Williams, J. (2002). The reluctant workforce: Undergraduates' part-time employment. *Education and Training, 44*, 5-10. doi:10.1108/00400910210416192
- Devlin, M., James, R., & Grigg, G. (2008). Studying and working: A national study of student finances and student engagement. *Tertiary Education and Management, 14*, 111-122. doi:10.1080/13583880802053044
- De Wit, M., Pouwer, F., Gemke, R. J., Delemarre-van de Waal, H. A., & Snoek, F. J. (2007). Validation of the WHO-5 Well-Being Index in adolescents with type 1 diabetes. *Diabetes Care, 30*, 2003-2006. Retrieved from <http://care.diabetesjournals.org/>
- Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980-2002). *Journal of Vocational Behavior, 66*, 124-197. doi:10.1016/j.jvb.2003.11.003
- Ford, M. T., Heinen, B. A., & Langkamer, K. L. (2007). Work and family satisfaction and conflict: A meta-analysis of cross-domain relations. *Journal of Applied Psychology, 92*, 57-80. doi:10.1037/0021-9010.92.1.57
- Frone, M. (2003). Work-family balance. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 143-162). Washington D.C.: American Psychological Association.
- Ganster, D. C. (1989). Worker control and well-being: A review of research in the workplace. In J. J. Hurrell, S. L. Sauter, & C. L. Cooper, *Job control and worker health* (pp. 213-219). New York, NY: Wiley.

- Gareis, K. C., Barnett, R. C., Ertel, K. A., & Berkman, L. F. (2009). Work-family enrichment and conflict. *Journal of Marriage and Family*, *71*, 696-707. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1741-3737](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1741-3737)
- Giancola, J. K., Grawitch, M. J., & Borchert, D. (2009). Dealing with the stress of college: A model for adult students. *Adult Education Quarterly*, *59*, 246-263.
doi:10.1177/0741713609331479
- Gorn, G., & Kanungo, R. (1980). Job involvement and motivation: Are intrinsically motivated managers more job involved? *Organisational Behaviour and Human Performance*, *26*, 265-277. doi:10.1016/0030-5073(80)90059-8
- Greenhaus, J., & Beutell, N. (1985). Sources of conflict between work and family roles. *The Academy of Management Review*, *10*, 76-88. Retrieved from <http://aom.org/amr/>
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, *31*, 72-92.
doi:10.2307/20159186
- Grzywacz, J. & Butler, A. (2005). The impact of job characteristics on work-to-family facilitation: Testing a theory and distinguishing a construct. *Journal of Organisational Health Psychology*, *10*, 97-109. doi:10.1037/1076-8998.10.2.97
- Grzywacz, J. G., & Carlson, D. S. (2007). Conceptualizing Work—Family Balance: Implications for Practice and Research. *Advances in Developing Human Resources*, *9*, 455-471. doi:10.1177/1523422307305487
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. (2010). *Multivariate data analysis. A global perspective*. (7th ed.). New Jersey, NJ: Prentice Hall.
- Hau, K. T., & Marsh, H. W. (2004). The use of item parcels in structural equation modelling: Non-normal data and small sample sizes. *British Journal of Mathematical & Statistical Psychology*, *57*, 327-351. Retrieved from www.search.proquest.com

- James, R. (2002). Students' changing expectations of higher education and the consequences of mismatches with reality. In P. Coaldrake (Ed.), *Responding to student expectations* (pp. 71-83). Paris, France: OECD.
- Kanungo, R. (1982). Measurement of job and work involvement. *Journal of Applied Psychology, 67*, 341-349. Retrieved from <http://www.apa.org/pubs/journals/apl/>
- Kirchmeyer, C. (1992). Perceptions of nonwork-to-work spillover: Challenging the common view of conflict-ridden domain relationships. *Basic and Applied Social Psychology, 13*, 231-249. doi:10.1207/s15324834basps1302_7
- Krause, K. (2005). Understanding and promoting student engagement in university learning communities. Retrieved from http://cshe.unimelb.edu.au/resources_teach/teaching_in_practice/docs/Stud_eng.pdf
- Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2005). Never let it rest: Lessons about student success from high-performing colleges and universities. *Change: The Magazine of Higher Learning, 37*, 44-51. Retrieved from <http://www.jstor.org/stable/40178221>
- Landis, R. S., Beal, D. J., & Tesluk, P. E. (2000). A comparison of approaches to forming composite measures in structural equation models. *Organizational Research Methods, 3*, 186-207. doi:10.1177/109442810032003
- Lenaghan, J., & Sengupta, K. (2007). Role conflict, role balance and affect: A model of the working student. *Journal of Behavioural and Applied Management, 4*, 88-109. Retrieved from <http://www.ibam.com/pubs/jbam/>
- Lodahl, T., & Kenjer, M. (1965). The definition and measurement of job involvement. *Journal of Applied Psychology, 49*, 24-33. Retrieved from <http://www.apa.org/pubs/journals/apl/>

- Maertz, C. P., & Boyar, S. L. (2011). Work-family conflict, enrichment, and balance under “levels” and “episodes” approaches. *Journal of Management*, *37*, 68-98.
doi:10.1177/0149206310382455
- Manthei, R. J., & Gilmore, A. (2005). The effect of paid employment on university students’ lives. *Education and Training*, *47*, 202-215. doi:10.1108/00400910510592248
- Markel, K., & Frone, M. (1998). Job characteristics, work-school conflict, and school outcomes among adolescents: Testing a structural model. *Journal of Applied Psychology*, *83*, 277-287. Retrieved from <http://www.apa.org/pubs/journals/apl/>
- Marks, S. R. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review*, *42*, 921-936. Retrieved from <http://www.jstor.org/stable/2094577>
- McNall, L. A., & Michel, J. S. (2011). A dispositional approach to work-school conflict and enrichment. *Journal of Business and Psychology*, *26*, 397-411. doi:10.1007/s10869-010-9187-0
- Meeuwisse, M., Severiens, S. E., & Born, M. P. (2010). Learning environment, interaction, sense of belonging and study success in ethnically diverse student groups. *Research in Higher Education*, *51*, 528-545. doi:10.1037/a0024420
- Michel, J. S., Mitchelson, J. K., Kotrba, L. M., Le Breton, J. M., & Baltes, B. B. (2009). A comparative test of work-family conflict models and critical examination of work-family linkages. *Journal of Vocational Behavior*, *74*, 199-218. doi:10.1016/j.jvb.2008.12.005
- Perrine, R. M. (1999). Stress and college persistence as a function of attachment style. *Journal of the First Year Experience and Students in Transition*, *11*, 25-38. Retrieved from <http://www.sc.edu/fye/journal/>

- Peeters, M., Watez, C., Demerouti, E., & de Regt, W. (2009). Work-family culture, work-family interference and well-being at work. *Career Development International, 14*, 700-713. doi:10.1108/13620430911005726
- Pike, G. R. (2000). The influence of fraternity or sorority membership on students' college experiences and cognitive development. *Research in Higher Education, 41*, 117-139. Retrieved from <http://link.springer.com/journal/11162>
- Pritchard, M. E., & Wilson, G. S. (2003). Using emotional and social factors to predict student success. *Journal of College Student Development, 44*, 18-28. doi:10.1353/csd.2003.0008
- Ratelle, C. F., Senècal, C., Vallerand, R. J., & Provencher, P. (2005). The relationship between school-leisure conflict and educational and mental health indexes. *Journal of Applied Social Psychology, 35*, 1800-1822. doi:10.1111/j.1559-1816.2005.tb02196.x
- Rice, R., Frone, M., & McFarlin, D. (1992). Work-nonwork conflict and the perceived quality of life. *Journal of Organisational Behaviour, 13*, 155-168. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1099-1379](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1379)
- Ruus, V. R., Veisson, M., Leino, M., Ots, L., Pallas, L., Sarv, E. S., & Veisson, A. (2007). Students' well-being, coping, academic success, and school climate. *Social Behavior and Personality: An International Journal, 35*, 919-936. Retrieved from <http://www.ingentaconnect.com/content/sbp/sbp>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1069-1081. Retrieved from <http://www.apa.org/pubs/journals/psp/index.aspx>
- Schaufeli, W., Martinez, I., Pinto, A., Salanova, M., & Bakker, A. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology, 33*, 464-481. doi:10.1177/0022022102033005003

- Sevastos, P., Smith, L., & Cordery, J. L. (1992). Evidence on the reliability and construct validity of Warr's (1990) well-being and mental health measures. *Journal of Occupational and Organizational Psychology*, *65*, 33-49. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)2044-8325](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)2044-8325)
- Sieber, S. D. (1974). Toward a theory of role accumulation. *American Sociological Review*, *39*, 567-578. Retrieved from <http://asr.sagepub.com/>
- Silver, H., & Silver, P. (1997). *Students: Changing roles, changing lives*. Buckingham, UK: Open University Press.
- Sorensen, L., & Winn, S. (1993). Student loans: A case study. *Higher Education Review*, *25*, 48-65. Retrieved from <http://www.highereducationreview.com/>
- Steele, J. P., & Fullagar, C. J. (2009). Facilitators and outcomes of student engagement in a college setting. *The Journal of Psychology*, *143*, 5-27. Retrieved from <http://www.tandfonline.com/toc/vjrl20/current#.U9o5NvmSyBI>
- Tam Oi I., & Morrison, K. (2005). Undergraduate students in part-time employment in China. *Educational studies*, *31*, 169-180. doi:10.1080/03055690500095555
- Thomas, L. & Ganster, D. (1995). Impact of family-supportive work variables on work-family conflict and strain. *Journal of Applied Psychology*, *80*, 6-15. Retrieved from <http://www.apa.org/pubs/journals/apl/>
- Trowler, V. (2010). *Student engagement literature review*. York UK: York University Higher Education Academy.
- Voydanoff, P. (2004). The effects of work demands and resources on work-to-family conflict and facilitation. *Journal of Marriage and Family*, *66*, 398-412. Retrieved from www.jstor.org/stable/3599845

- Warr, P. (1990). The measurement of well-being and other aspects of mental health. *Journal of Occupational Psychology*, *63*, 193-210. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)2044-8325](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)2044-8325)
- Warr, P. (1994). A conceptual framework for the study of work and mental health. *Work and Stress*, *8*, 84-97. Retrieved from www.tandfonline.com/toc/twst20/current#.U9o6ifmSyBI
- Wayne, J. H., Grzywacz, J. G., Carlson, D. S., & Kacmar, K. M. (2007). Work-family facilitation: A theoretical explanation and model of primary antecedents and consequences. *Human Resource Management Review*, *17*, 63-76. doi:10.1016/j.hrmr.2007.01.002
- Witt, L. A., & Carlson, D. S. (2006). The work-family interface and job performance: moderating effects of conscientiousness and perceived organizational support. *Journal of Occupational Health Psychology*, *11*, 343. doi:10.1037/1076-8998.11.4.343
- Wyland, R. L., Lester, S. W., Mone, M. A., & Winkel, D. E. (2013). Work and school at the same time: A conflict perspective of the work-school interface. *Journal of Leadership & Organizational Studies*, *20*, 346-357. doi:1548051813484360.
- Zimmerman, K., & Hammer, L. (2010). Work-family positive spillover. Where have we been and what lies ahead. In J. Houdmont & L. Stavroula (Eds.), *Contemporary occupational health psychology: Global perspectives on research and practice* (Vol. 1). Hoboken, NJ: Wiley-Blackwell.

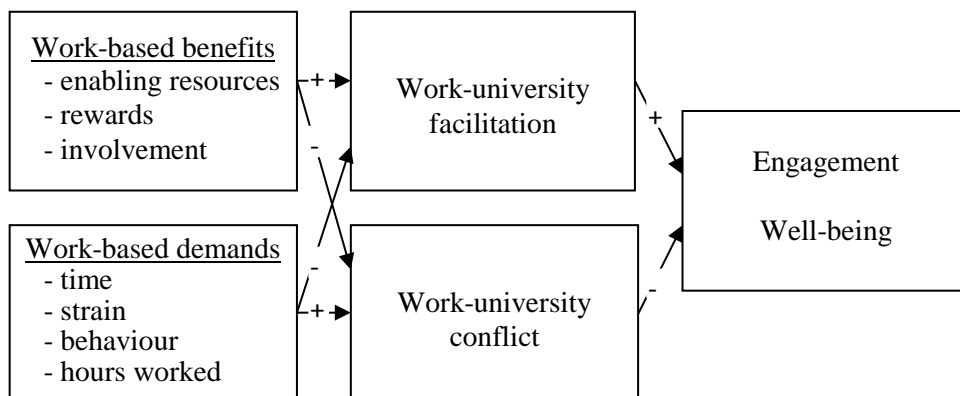


Figure 1. Work-based benefits and demands are associated with work-university facilitation and work-university conflict, which, in turn, are associated with student well-being and engagement.

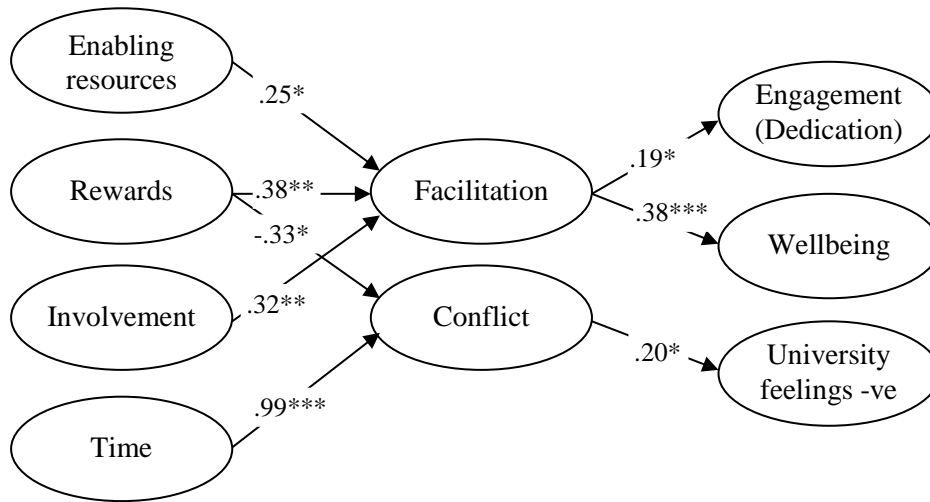


Figure 2. Final model with non-significant pathways and latent variables removed to simplify. More enabling resources, rewards, and involvement were related to more facilitation; fewer rewards and more time demands were related to more conflict. Higher facilitation was related to more engagement and higher wellbeing; more conflict was related to more negative feelings. Facilitation and conflict did not operate as mediators. Standardised path weights are reported.

Table 1

Summary Data, Bivariate Correlations (below Diagonal), and Latent Variable Correlations (above Diagonal); N = 185

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. University feelings + ve	16.44	4.70	–	-.27**	.55***	.47***	.47***	-.11	-.06	.01	.01	-.03	.07	.14	.07	-.07
2. University feelings – ve	14.82	5.00	-.20**	–	-.34***	-.35***	-.30***	.10	.16*	.09	.08	.16*	.24**	.21**	-.01	.05
3. Dedication	15.68	3.03	.46***	-.23**	–	.71***	.21*	.18*	-.03	.18*	.21**	.08	.16*	.11	.05	-.05
4. Vigour	12.10	3.06	.35***	-.27***	.51***	–	.02	.01	-.10	.08	.04	.04	-.06	-.01	.04	-.03
5. General well-being	16.19	3.94	.41***	-.27***	.17*	.06	–	.17*	-.15	.24**	.31***	.26**	.01	-.17*	-.16	.06
6. Facilitation	14.80	4.65	-.07	.07	.14	.07	.14	–	-.11	.70***	.74***	.58***	.18*	-.18*	-.19*	.45***
7. Conflict	14.57	4.67	-.05	.15*	-.03	-.14	-.12	-.07	–	.01	-.04	.19*	.79***	.49***	.44***	-.04
8. Enrichment	15.98	2.88	.01	.08	.16*	.08	.19*	.56***	.01	–	.74***	.50***	.20*	-.09	-.22**	.05
9. Rewards	19.30	5.28	.10	.05	.18*	.08	.27**	.62***	.01	.61***	–	.56***	.28**	-.11	-.20**	.05
10. Involvement	9.85	3.22	-.03	.11	-.01	.04	.20**	.41***	.15*	.36***	.44***	–	.52***	.12	.04	.25**
11. Time-demands	11.74	3.44	.07	.16*	.03	-.13	.03	.04	.65***	.13	.15*	.34***	–	.62***	.45***	.40***
12. Strain-demands	11.18	3.61	.12	.19**	.08	-.03	-.13	-.13	.41***	-.06	-.09	.10	.53***	–	.59***	.16
13. Behaviour-demands	5.79	2.39	.08	-.06	.02	-.04	-.13	-.17*	.36***	-.17*	-.19**	.03	.34***	.48***	–	.10
14. Hours worked	16.28	7.86	-.06	.04	-.06	-.06	.07	-.03	.41***	.04	.04	.21**	.44***	.15*	.08	–

* $p < .05$.** $p < .01$.*** $p < .001$